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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/808,973	03/16/2001	Robert V. Belenger	79485	4677

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Office of Counsel, Bldg 112T
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EXAMINER
CHAU, COREY P

ART UNIT	PAPER NUMBER
2644	2

DATE MAILED: 10/01/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/808,973	BELENGER ET AL.	
	Examiner	Art Unit	
	Corey P Chau	2644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-23 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-23 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 3/16/2001 is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 3, and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Konstantinou et al (hereafter as Konstantinou).

3. Konstantinou discloses an apparatus that includes all the limitations recited in claims 1. Regarding Claim 1, Konstantinou discloses a directional microphone (i.e. sensor circuit) designed to receive sounds, which is well known in the art to generate an electrical signal (i.e. amplitude of the detected audio signal) (Fig. 1, reference 22; column 3, lines 24-28); a microprocessor that calculates the difference between the calculated reference sound-to-noise ratio and calculated current sound-to-noise ratio, whereby "the sound-to-noise ratio is a ratio in which received sound level is the numerator and the difference between total received noise level and received sound level is the denominator" (i.e. a difference circuit) (Column 5, lines 11-59); the microprocessor then goes to a decision step to determine whether the current sound-to-noise ratio is different from the reference sound-to-noise ratio, "if there is a difference between the two sound-to-noise ratio, this signifies that emitted sound level may need to be adjusted in order to maintain the original sound-to-noise ratio" (i.e. control circuit

for generating a control signal that effects at least one of attenuation, augmentation and maintenance of the amplitude of audio signals) (Column 5, lines 43-59).

4. Regarding Claim 2, Konstantinou discloses an amplifier (Fig 1, reference 14 and 16; column 3, lines 49-58).

5. Claim 3 is essentially similar to Claim 1 and is rejected for the reasons stated above apropos of Claim 1.

6. Regarding Claim 4, Konstantinou discloses an analog-to-digital converter (Fig 1, reference 62 and 64).

7. Regarding Claim 5, Konstantinou discloses one embodiment of the invention that deals with the microprocessor, which determines whether emitted sound level from sound-emitting device is greater or less than a threshold amount (i.e. detect an audio signal). Therefore, it is a criteria that needs to be met in order for the function of increasing or decreasing emitted sound to perform as usual or not (i.e. transfer the signal when the sensor circuit detects an audio signal) (Column 6, lines 28-45).

8. Claim 6 is essentially similar to Claim 5 and rejected for the reason stated above apropos of Claim 5. The microprocessor can also perform the operation of a sound activation circuit. Therefore, the microprocessor can also be used as a sound activation circuit.

9. Regarding Claim 7, Konstantinou discloses an apparatus that will increase or decrease emitted sound level in order to maintain the original sound-to-noise ratio if there is a difference between the current sound-to-noise ratio and reference sound-to-noise ratio by a predetermine amount (i.e. attenuation of amplitude when amplitude of

the sensor circuit output signal exceed the reference audio signal amplitude by a predetermine magnitude) (Fig. 2, reference 140, 150 and 155; column 5, lines 49-52; column 6, lines 32-39).

10. Regarding Claim 8, Konstantinou discloses an apparatus that will increase or decrease emitted sound level in order to maintain the original sound-to-noise ratio if there is a difference between the current sound-to-noise ratio and reference sound-to-noise ratio by a predetermine amount (i.e. augmentation of the amplitude of the audio signals generated by the audio device when the reference audio signal amplitude exceeds the amplitude of the sensor circuit output signal by a predetermined magnitude) (Fig. 2, reference 140, 150and 155; column 5, lines 49-52; column 6, lines 32-39).

11. Regarding Claim 9, Konstantinou's apparatus will maintain the amplitude of the audio signal if there is no difference between the current sound-to-noise ratio and the reference sound-to-noise ratio. (Fig. 2, reference 140; column 5, lines 46-48).

12. Regarding Claim 10, Konstantinou discloses a remote control device that contains a signal transmitter, which communicates with the volume up control and volume down control to transmit signal to sound emitting device (i.e. transmitter circuit to transmitting the control signal to a control signal receiver of the audio device) (Fig. 1, reference 18,20, 30, and 34; column 4, lines 33-37 and lines 49-56).

13. Claim 12 is essentially similar to Claim 5 and 6 and is rejected for the reason stated above apropos of Claim 5 and 6.

14. Claim 13 is essentially similar to Claim 1, 5, 6, and 12 and is rejected for the reason stated above apropos of Claim 1, 5, 6, and 12.

15. Claim 14 is essentially similar to Claim 1 and 5 and is rejected for the reason stated above apropos of Claim 1 and 5.

16. Claim 15 is essentially similar to Claim 1 and 2 and is rejected for the reason stated above apropos of Claim 1 and 2.

17. Claim 16 is essentially similar to Claim 1 and 5 and is rejected for the reason stated above apropos of Claim 1 and 5.

18. Claim 17 is essentially similar to Claim 1 and 4 and is rejected for the reason stated above apropos of Claim 1 and 4.

19. Claim 18 is essentially similar to Claim 1 and 2 and is rejected for the reason stated above apropos of Claim 1 and 2.

20. Claim 19 is essentially similar to Claim 1 and 10 and is rejected for the reason stated above apropos of Claim 1 and 10.

21. Claim 20 is essentially similar to Claim 1 and 7 and is rejected for the reason stated above apropos of Claim 1 and 7.

22. Claim 21 is essentially similar to Claim 1 and 8 and is rejected for the reason stated above apropos of Claim 1 and 8.

23. Claim 22 is essentially similar to Claim 1 and 9 and is rejected for the reason stated above apropos of Claim 1 and 9.

24. Regarding Claim 23, Konstantinou discloses a directional microphone designed to receive sounds from a specific direction (i.e. acoustic signal sensor) and "is

configured in a remote control device such that it is adjacent to and points in the same direction as remote signal transmitter, thus providing the greatest likelihood that directional microphone is pointing at sound-emitting device" (Fig. 1, reference 22 and 36; column 3, lines 24-35).

Claim Rejections - 35 USC § 103

25. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

26. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Konstantinou in view of U.S. Patent Application 09/047252 to Mellott.

27. Konstantinou discloses an automatic volume control apparatus, but lacks a switch to permit a user to activate or deactivate the apparatus. Mellott discloses a switch or a button for the user to control whether or not the apparatus operates such that it provides the necessary attenuation, or not. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the automatic volume control apparatus of Konstantinou with teaching of Mellott to include a switch for the user to control whether or not the apparatus operates such that it provides the necessary attenuation, or not.

Conclusion

28. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

29. The following patent are cited to further show the state of the art with respect to automatic volume control in general:

U.S. Pat. No. 6,195,438 to Yumoto et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Corey P Chau whose telephone number is (703)305-4865. The examiner can normally be reached on Monday - Friday 9:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Forester W Isen can be reached on (703)305-4386. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-3900.

FORESTER W. ISEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600